CHAPTER V
CONCLUSION AND RECOMMENDATION

Molybdenum glycolate precursor can be synthesized via One pot Oxide Synthesis (OOPS) process using molybdenum oxide and ethylene glycol as starting material. The suitable temperature to form the molybdenum oxide gel is reaction temperature of 50°C. The gel can be formed using HCl, HNO_3 or without an acid catalyst. Moisture stable molybdenum glycolate precursor could be used to synthesize the orthorhombic phase of molybdenum oxide after calcinations at 350°C. Both HCl and HNO_3 give different morphology and slightly different surface area. The calcinations temperature, time and heating rate do influence the surface area, crystallinity and morphology of the molybdenum oxide products. The reaction temperature and the amounts of methanol and nitric acid do not affect the crystallinity and morphology of molybdenum oxide. The optimal condition of calcinations temperature, time and heating rate that give completely crystallinity and purely molybdenum oxide is 350 °C, 1 h and 1°C/min, respectively. The H_2O/ HNO_3 ratio of 8 that calcined at the suitable condition giving highest specific surface area is 16 m^2/g.